

WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month was considerably below the normal at St. Johns, N. F., and slightly below at land stations on the coasts of Canada and the United States. It was somewhat higher than usual in the West Indies, Bermudas, Azores, and on the north coast of Scotland, while in the southern part of Ireland and England comparatively large plus departures were the rule.

Judging from reports received, the number of days on which fog was observed was not far from the normal over the Grand Banks and the greater part of the steamer lanes, as well as at land stations in the British Isles.

Ordinarily the number of observations showing winds of gale force is considerably less in May than April, and the month under discussion was no exception to the general rule. Over the northern steamer lanes gales were not as prevalent as usual, while in southern waters their number was somewhat above the normal.

On the 2d there was a moderate disturbance central near latitude 50° N., longitude 30° W. Storm log follows:
British S. S. *Poland*:

Gale began on the 1st, wind SSW. Lowest barometer 29.56 inches at 7 a. m. on the 2d, wind SW., in latitude 49° 51' N., longitude, 29° 05' W. End on the 2d. Highest force of wind 8; shifts S.-SW.

On the same day the observer on board the American S. S. *Trontolite* reported a most unusual mirage in the Gulf of St. Lawrence, as follows:

At 4 a. m. on the 2d, in latitude 47° 34' N., longitude 62° 32' W., wind calm, sky blue, observed mirage in the east of two steamers apparently upside down. They changed in form until they appeared like a statue, then finally assumed their proper shape. Afterwards the distance of these vessels was found to be about 45 miles.

On the 3d there was a low central near St. Johns, N. F., and while moderate SW. winds prevailed in the southerly quadrants at the time of observation, they increased to gale force later in the day, as shown by following storm logs:

Belgian S. S. *Samland*:

Gale began on the 3d, wind W. Lowest barometer 30.08 inches at 6 p. m. on the 3d, wind W., 7, in latitude 40° 30' N., longitude 56° 05' W. End on the 3d, wind W. Highest force of wind 12, W.; steady from W.

Swedish S. S. *Carlsholm*:

Gale began on the 3d, wind SW. Lowest barometer 29.81 inches at midnight on the 3d, wind WNW., 8, in latitude 41° 37' N., longitude 50° 21' W. End on the 4th, wind NNW. Highest force of wind 9; shifts WSW.-SSW.

This disturbance drifted slowly northeastward during the next two days, and on the 4th moderate gales were encountered over a limited area between the 35th and 45th parallels and the 40th and 50th meridians. On the 5th gales were experienced by vessels in the eastern section of the steamer lanes. Storm log follows:

American S. S. *Sunbeam*:

Gale began on the 4th, wind WSW. Lowest barometer 29.58 inches at 2 a. m. on the 5th, wind WNW., in latitude 44° 41' N., longitude 35° 27' W. End on the 6th, wind N. Highest force of wind 9; shifts W.-NW.

From the 6th to the 8th moderate weather was the rule over the entire ocean, with considerable fog on the

6th and 7th between the 60th meridian and American coast, while it was also reported over the Grand Banks and off the west coast of Ireland.

From the 9th to the 12th there was a nearly stationary disturbance central near the coast of Nova Scotia, with the storm area extending as far south as the 35th parallel. Storm logs follow:

American S. S. *Shenandoah*:

Gale began on the 9th, wind NW. Lowest barometer 29.52 inches at 6:30 p. m. on the 10th, wind NW., 10, in latitude 39° 02' N., longitude 55° 21' W. End on the 10th, wind NW. Highest force of wind 10, NW.; steady from NW.

Japanese S. S. *Penang Maru*:

Gale began on the 9th, wind SW. Lowest barometer 29.65 inches at 4 a. m. on the 10th, wind WNW., in latitude 36° 25' N., longitude 55° 45' W. End on the 11th, wind NW., 4. Highest force of wind 9, W.; steady from W.

From the 11th to the 15th three vessels reported a peculiar red mist extending from the west coast of northern Africa to the 53d meridian, caused by a fine red sand, a sample of which was forwarded to the Central Office of the Weather Bureau by Captain van Os, master of the Dutch S. S. *Yildum*. Reports follow:

Dutch S. S. *Hagno*:

At 8 p. m. on May 13th in latitude 8° 11' N., longitude 50° 05' W., red mist observed that makes the whole horizon very hazy. This lasted until 3 p. m. on May 15 in latitude 5° 21' N., longitude 45° 02' W. In this red mist was the wet air mixed with a kind of red sand and dust. Wind remained steady from NE., force 4 to 5.

British S. S. *Dundrennan*:

From May 11 to 15 in latitude 7° 47' N., longitude 44° 26' W., to latitude 18° 44' N., longitude 53° 22' W. (L. M. N.), the hazy weather recorded was apparently due to the fact that the air was laden with a very fine reddish-brown sand similar to that found in the Harmattan winds experienced off the west coast of Africa. Judging by the deposits on the ship's cordage, the amount was greatest on the 14th. Position at Greenwich mean noon, latitude 15° 32' N., longitude 50° 34' W.

Dutch S. S. *Yildum*:

On the night of the 11th and 12th the vessel was about 240 to 250 miles off the African coast. For more than three days the wind was N. to NE., force 1 to 5, atmosphere hazy. At daybreak on May 12 we found the vessel covered with red-brown colored dust. Sample forwarded to you was found between latitudes 14° N., and 15° N., longitudes 22° 10' W. and 21° 30' W.

Capt. W. D. Barret, master of the American S. S. *Metapan*, reports:

A cyclonic storm swept the coast of Colombia between May 11 and 12. Thousands of banana trees destroyed.

Charts VIII and IX show the conditions on the 15th and 16th, respectively, when there was one fairly well-developed low over the middle section of the steamer lanes and another off the coast of Europe. Storm logs follow:

British S. S. *Valemore*:

Gale began on the 15th, wind S. Lowest barometer, 29.24 inches at 10 a. m. on the 15th; wind S., 7, in latitude 48° 12' N., longitude 35° 30' W. End on the 16th, wind W. Highest force of wind 9, W. by S.; shifts S.-W. by S.

British S. S. *Stanmore*:

Gale began on the 15th, wind E. Lowest barometer 29.18 inches at 8 a. m. on the 16th, wind E., 8, in latitude 57° 05' N., longitude 20° 30' W. End on the 16th, wind E. Highest force of wind 8; steady from E.

By the 17th this disturbance had decreased in intensity, but on the 18th had increased again, as shown by the following storm logs:

British S. S. *Lapland*:

Gale began on the 17th, wind NNE. Lowest barometer 29.35 inches at midnight on the 17th, wind NNW., 9, in latitude 43° 47' N., longitude 37° 03' W. End on the 18th, wind WSW. Highest force of wind 10; shifts N.-NNW.-NW.

American S. S. *Sarcozie*:

Gale began on the 18th, wind SW. Lowest barometer 29.72 inches at noon on the 18th, wind SW., in latitude 47° 31' N., longitude 25° 02' W. End on the 19th. Highest force of wind 10, SW.; steady from SW.

From the 19th to the 27th, with the exceptions noted below, a period of fine weather existed over the entire ocean, with comparatively high pressure and slight gradients, although from the 19th to 21st fog was reported off both the American and European coasts.

On the 21st the American S. S. *Sabine Sun* encountered a most peculiar squall of short duration in the vicinity of Nassau, as shown by following report:

At 10 p. m. on the 21st passed through a fresh southerly gale, force 8, lasting 45 minutes. Wind steady from S., barometer at 30.05 inches. Position, latitude 26° 50' N., longitude 79° 21' W.

While a number of other vessels were near by on the 21st and 22d, this was the only report received denoting unusual conditions.

At Greenwich mean noon on the 27th high pressure and moderate winds, with fog, prevailed off the coast of Europe. In spite of that fact the American S. S. *America* encountered a severe easterly gale early in the day, as shown by following storm log:

Gale began on the 27th, wind ESE. Lowest barometer 30.36 inches at 7 a. m. on the 27th, wind ESE., 3, in latitude 48° 02' N., longitude 16° 26' W. End on the 27th, wind ESE. Highest force of wind 11; steady from ESE.

Charts X and XI show the conditions on the 28th and 29th, respectively. On the former date a strong NE. gale prevailed off the coast of Hatteras, and on the latter there was a disturbance of limited extent in mid-ocean. Storm logs follow.

American S. S. *El Mundo*:

On the 28th fresh NE. gales and heavy sea. Overcast and squally. Lowest barometer 29.81 inches. Greenwich mean noon position, latitude 31° 13' N., longitude 78° 55' W.

Italian S. S. *Mincio*:

Gale began on the 28th, wind NE. Lowest barometer 30.08 inches at 1.15 p. m. on the 28th, in latitude 36° 09' N., longitude 73° 18' W. End 7 p. m. on the 19th. Highest force of wind 10, N.; shifts not given.

Dutch S. S. *Noordam*:

Gale began on the 29th, wind SSW., 7. Lowest barometer 29.61 inches at 2 p. m. on the 29th, wind SSW., 8, in latitude 44° 27' N., longitude 38° 04' W. End at 10 p. m. on the 29th, wind NW., 6. Highest force of wind 8, SSW. Shifts SSW.-NNW.

At Greenwich mean noon on the 29th a Low covered the greater part of the Gulf of Mexico, although at the time only moderate winds were reported from that region. Early in the morning, however, the American S. S. *Pennsylvania* encountered a severe squall from the north, as shown by following report.

Gale began on the 29th, wind N. Lowest barometer 29.85 inches at 1:30 a. m. on the 29th, wind NW., in latitude 23° N., longitude 94° 30' W. End on the 29th, wind N. Highest force of wind 9, NNW. This gale came on suddenly and lasted one hour.

NORTH PACIFIC OCEAN.

By F. G. TINGLEY.

The month opened with an extensive area of low pressure occupying the Aleutian area and one of high pressure lying between the Hawaiian Islands and the American mainland. High pressure also covered Japan and Mongolia. Moderate northerly gales were prevailing on the western portion of the northern steamer route and southerly gales along the eastern portion. By the evening of the 2d the Aleutian depression had moved to the Gulf of Alaska, where it slowly diminished in energy, finally passing inland on the 7th. On the 9th a second depression appeared over the Aleutians and on the 11th a third and more vigorous one. Both continued to move eastward as far as the Gulf of Alaska.

Following the last-named depression, pressure rose strongly over mid-ocean, the barometer at Midway Island recording 30.30 inches on the evening of the 15th and at Dutch Harbor 30.48 inches on the morning of the 16th. This change was of brief duration, however, as pressure was falling over the western Aleutians by the evening of the latter date in connection with the advance of a depression toward Bering Sea. On the 17th high pressure prevailed over both the eastern and western portions of the ocean. On the 19th the high-pressure areas had joined in mid-ocean and the combined areas extended from the American coast to the Kuril Islands. During the next 10 days high pressure was fairly well maintained in middle latitudes, while a series of depressions of moderate size and energy moved eastward over Bering Sea and the Gulf of Alaska. At the close of the month pressure was generally low over the western portion of the ocean, with depressions centered to the south of Japan and over the Aleutians and fresh to strong northerly gales prevailing along the northern steamer routes west of the 160th meridian, west longitude. Pressure remained moderately high over eastern portions of the ocean.

During the period from about the 4th to 12th a small typhoon prevailed in the region lying east of the Philippines and Formosa. Observations from land stations failed to give any positive indication of the existence of this storm, but on the 7th and 8th the British S. S. *Anglo-Mexican* was heavily involved near 21° 30' N., 133° E. This vessel, under command of Capt. R. P. Davis, Observer W. C. Morris, was proceeding toward Hongkong from Panama. These officers have furnished the following account of their experience in this typhoon:

May 3. Position at G. M. N., 19° 50' N., 154° 21' E., wind S., light, very fine, and clear, but with infrequent heavy showers, sea smooth, bar. 29.89.

May 4. G. M. N., 21° N., 150° 26' E., similar weather, very heavy rain showers, sea smooth, bar. 29.85.

May 5. 21° 19' N., 145° 45' E., wind S., 1-2, very fine and clear, infrequent showers, sea slight, S., bar. 29.87.

May 6. 21° 9' N., 141° 28' E., wind S., 1-2, sky overcast and dull looking through night but clear through daytime, with few Fr. Nb. clouds, sea slight, S., bar. 29.86.

May 7. 21° 18' N., 137° 10' E., wind SE., 2, overcast with passing showers, conspicuous southerly swell, heavy lightning. At noon sky became overcast and rain started to fall in torrents, with vivid lightning. 4 p. m. Wind increasing and sea rising with increasing squalls. 6 p. m. Barometer falling and weather showing all signs of approaching storm. 10 p. m. Barometer down to 29.55, with high sea, terrific squalls of wind and rain. Midnight. Barometer falling fast, wind steady in direction and increasing in force, with incessant terrific squalls, accompanied by heavy rain, sea mountainous.